

### **Listing of Claims**

1. (Allowed) A method for visualizing at least a portion of a synchronized optical network (SONET) ring, the method comprising instructions for:  
providing one or more menus from which a user may specify specific components of the SONET ring;  
calculating and drawing a graphical representation of the SONET ring illustrating each node and link of the SONET ring specified by the user;  
receiving a user selection for identifying one node of the SONET ring;  
accessing an inventory system for data related to the user selection; and  
displaying more detailed information about the selected node wherein the link comprises a time slot.
2. (Allowed) The method of claim 1 wherein the more detailed information includes individual information about any links connected to the selected node.
3. (Allowed) The method of claim 1 wherein the more detailed information includes individual information about any drop ports on the selected node.
4. (Allowed) The method of claim 1 wherein the instructions for calculating and drawing a graphical representation of the SONET ring include:  
determining a percent consumed and a percent spare capacity for each node and graphically displaying the percentages with the graphical representation of the node.
5. (Allowed) The method of claim 4 wherein the instructions for calculating and drawing a graphical representation of the SONET ring further include:  
determining a percent restricted and a percent pending for each node and graphically displaying the percentages with the graphical representation of the node.
6. (Allowed) The method of claim 1 wherein the instructions for calculating and drawing a graphical representation of the SONET ring include:  
determining a consumed or spare status for each link and graphically displaying the status

with the graphical representation of the link.

7. (Allowed) The method of claim 1 wherein the instructions for calculating and drawing a graphical representation of the SONET ring include:

determining a utilized drop port for each node and link connection and graphically displaying the utilized drop port with the graphical representation of the node.

8. (Allowed) The method of claim 1 wherein the instructions for calculating and drawing a graphical representation of the SONET ring include:

determining whether each node serves as a hub and graphically displaying a hub designation with the graphical representation of the corresponding node.

9. (Allowed) The method of claim 1 wherein user selection for the node is a default selection.

10. (Allowed) The method of claim 1 further comprising instructions for: receiving a user selection for identifying one link of the SONET ring; and displaying more detailed information about the identified link.

11. (Allowed) The method of claim 1 wherein the more detailed information about the identified link includes a consumption status.

12. (Amended) A monitoring system for providing interactive topology information about a ring-type network, the monitoring system comprising:

an inventory system connected to the ring-type network for collecting status data from the ring-type network in a raw format; and

a computer system capable of retrieving raw format status data from the inventory system, and further including:

means for providing one or more menus from which a user may specify specific components of the ring-type network;

means for calculating and drawing a graphical representation of the ring-type

network illustrating each node and link of the ring-type network specified by the user;

means for receiving a user selection for identifying one component of the ring-type network;

means for displaying specific information by placing a cursor on a specific area;

and

means for displaying more detailed information about ~~he~~ the selected component.

13. (Allowed) The monitoring system of claim 12 wherein the more detailed information about the selected component includes a consumption status.

14. (Allowed) The monitoring system of claim 12 wherein the selected component is a node of the ring-type network.

15. (Allowed) The monitoring system of claim 14 wherein the more detailed information includes individual information about any links connected to the selected node and individual information about any drop ports on the selected node.

16. (Allowed) The monitoring system of claim 14 wherein the means for calculating and drawing a graphical representation of the ring-type network includes:

computer instructions for determining a percent consumed and a percent spare capacity for each node and graphically displaying the percentages with the graphical representation of the node.

17. (Allowed) The monitoring system of claim 14 wherein the means for calculating and drawing a graphical representation of the ring-type network further includes:

computer instructions for determining a percent restricted and a percent pending for each node and graphically displaying the percentages with the graphical representation of the node.

18. (Allowed) The monitoring system of claim 14 wherein the means for calculating and drawing a graphical representation of the ring-type network includes:

computer instructions for determining a consumed or spare status for each link and

graphically displaying the status with the graphical representation of the link.

19. (Allowed) The monitoring system of claim 14 wherein the means for calculating and drawing a graphical representation of the ring-type network includes:

computer instructions for determining a utilized drop port for each node and link connection and graphically displaying the utilized drop port with the graphical representation of the node.

20. (Allowed) The monitoring system of claim 14 wherein the means for calculating and drawing a graphical representation of the ring-type network includes:

computer instructions for determining whether each node serves as a hub and graphically displaying a hub designation with the graphical representation of the corresponding node.

21. (Allowed) The monitoring system of claim 12 wherein the ring-type network is a synchronized optical network, and the inventory system is a trunks integrated record keeping system.

22. (Allowed) The monitoring system of claim 14 wherein the more detailed information includes a mismatch identifier about any links that are inventoried differently by connecting nodes.

23. (Allowed) The monitoring system of claim 14 wherein the more detailed information includes an indicator that service is dropping at a specific node.

24. (Allowed) The monitoring system of claim 12 wherein the more detailed information identifies bandwidth usage between two nodes.

25. (Allowed) The monitoring system of claim 12 wherein the more detailed information identifies drop ports connected to a specific link.

26. (Allowed) A monitoring system for providing interactive topology information

about a ring-type network, the monitoring system comprising:

an inventory system for providing data about a logical ring-type network and for collecting status data from the ring-type network in a raw format; and

a computer system including a system interface capable of retrieving raw format status data from the inventory system and a graphical user interface for providing one or more menus from which a user may specify specific components of the ring-type network, for calculating and drawing a graphical representation of the ring-type network illustrating each node and link of the ring-type network specified by the user, for receiving a user selection for identifying one component of the ring-type network and for displaying more detailed information about the selected component.

27. (Allowed) The monitoring system of claim 26 wherein the more detailed information about the selected component includes a consumption status.

28. (Allowed) The monitoring system of claim 26 wherein the selected component is a node of the ring-type network.